

# ABSTRACT

The present invention is a composite material, a process and a product formed by the process. The composite is formed by a process that includes forming a fibrous structure comprising fibers into a preform, coating the fibers of the fibrous structure preform with elemental carbon to impregnate that preform, infiltrating the preform with boron carbide to form an impregnated green body. The impregnated green body is infiltrated with liquid naphthalene or other carbon precursor, which is thereafter pyrolyzed to form a carbon char. Then, the char infiltrated green body is infiltrated with molten silicon to form a continuous matrix throughout the composite. The silicon in the continuous matrix is reacted with the carbon char to form silicon carbide.